

WHAT IS CLAIMED IS:

1. A wheel-identification-data registration assisting apparatus operable with a system including a body-side device disposed on a body of a vehicle and a plurality of wheel-side devices disposed on respective wheels of the vehicle, said apparatus being operable to assist said system in an operation associated with registration in said body-side device of information corresponding to wheel identification data which identify each of said plurality of wheel-side devices and which are transmitted from said each wheel-side device, said wheel-identification-data registration assisting apparatus comprising:

a plurality of wheel-identification-data registration assisting devices, operable when located close to said wheels, respectively, to assist said system in at least a portion of the operation associated with said registration of the information corresponding to said wheel identification data in said body-side device; and

an assisting-device control device operable to control said plurality of wheel-identification-data registration assisting devices.

2. The wheel-identification-data registration assisting apparatus according to claim 1, wherein each of said plurality of wheel-identification-data registration assisting devices includes at least one of (a) a registration assisting portion

operable to assist said system in at least a portion of a series of operation of the system from transmission of said wheel identification data from a corresponding one of said plurality of wheel-side devices to the registration of said information corresponding to said wheel identification data in said body-side device, and (b) a data-inspection assisting portion operable to assist said system in at least a portion of a series of operation from the transmission of said wheel identification data from said corresponding one wheel-side device to inspection of said information corresponding to said wheel identification data which has been registered in said body-side device.

3. The wheel-identification-data registration assisting apparatus according to claim 1, wherein said plurality of wheel-identification-data registration assisting devices include respective transmission-commanding portion operable to command said plurality of wheel-side devices, respectively, to transmit said wheel identification data, and said assisting-device control device includes a transmission control portion operable to control said transmission-commanding portions to control the transmission of said wheel identification data from each of said plurality of wheel-side devices.

4. The wheel-identification-data registration assisting apparatus according to claim 1, wherein each of said wheel-identification-data registration assisting devices includes an indicator portion operable upon reception of said wheel

identification data from a corresponding one of said plurality wheel-side devices, to supply said body-side device with at least one of said wheel identification data and information indicating the reception of said wheel identification data, and said assisting-device control device includes a control portion operable to control said indicator portion of said each wheel-identification-data registration assisting device.

5. The wheel-identification-data registration assisting apparatus according to claim 1, wherein each of said wheel-identification-data registration assisting devices includes a wheel-identification-data supply portion operable upon reception of said wheel identification data from a corresponding one of said plurality wheel-side devices, to supply said body-side device with said wheel identification data received from said corresponding one wheel-side device, and said assisting-device control device includes a control portion operable to control said wheel-identification-data supply portion of said each wheel-identification-data registration assisting device.

6. The wheel-identification-data registration assisting apparatus according to claim 1, wherein each of said wheel-identification-data registration assisting devices includes a registration assisting portion operable to assist said body-side device to register the information corresponding to said wheel identification data, and said assisting-device control device includes a registration control portion operable to control said

registration assisting portion of said each wheel-identification-data registration assisting device.

7. The wheel-identification-data registration assisting apparatus according to claim 1, wherein each of said plurality of wheel-identification-data registration assisting devices includes an inspection assisting portion operable to assist said body-side device to inspect said information corresponding to said wheel identification data, which information have been registered in said body-side device, and said assisting-device control device includes an inspection control portion operable to control said inspection assisting portion of said each wheel-identification-data registration assisting device.

8. The wheel-identification-data registration assisting apparatus according to claim 7, wherein said inspection assisting portion includes a data-transmission commanding portion operable to command a corresponding one of said plurality of wheel-side devices to transmit said wheel identification data to said body-side device.

9. The wheel-identification-data registration assisting apparatus according to claim 1, wherein each of said plurality of wheel-identification-data registration assisting devices includes a signal transmitting portion operable to effect at least one-way transmission of a signal between a corresponding one of said plurality of wheel-side devices and said

signal transmitting portion, said each wheel-identification-data registration assisting device being operable when said signal transmitting portion is located close to said corresponding one wheel-side device, to assist said system in at least a portion of a series of operation of the system from transmission of said wheel identification data from said corresponding one wheel-side device to the registration of said information corresponding to said wheel identification data in said body-side device.

10. The wheel-identification-data registration assisting apparatus according to claim 9, wherein said signal transmitting portion is provided with an adjusting device operable to adjust at least one of an intensity of said signal transmitted from said signal transmitting portion and a reception sensitivity of said signal transmitting portion with respect to said signal transmitted from the corresponding wheel.

11. The wheel-identification-data registration assisting apparatus according to claim 9, further comprising a relative-movement device operable to move said signal transmitting portion and said corresponding one wheel-side device relative to each other.

12. The wheel-identification-data registration assisting apparatus according to claim 11, wherein said relative-movement device includes a relative-rotation device operable to rotate said signal transmitting portion and said

corresponding wheel relative to each other about an axis of rotation of said corresponding wheel.

13. The wheel-identification-data registration assisting apparatus according to claim 11, wherein said relative-movement device includes a rotating device operable to rotate said signal transmitting portion.

14. The wheel-identification-data registration assisting apparatus according to claim 11, wherein said assisting-device control device includes (a) a relative-movement control portion operable to control said relative-movement device to establish a predetermined relative position between said signal transmitting portion and said corresponding one wheel-side device, and (b) a transmission control portion operable to command said signal transmitting portion to effect at least said one-way transmission of said signal when said signal transmitting portion and said corresponding one wheel-side device are located close to each other.

15. The wheel-identification-data registration assisting apparatus according to claim 1, further comprising a supporting device arranged to support the vehicle and said plurality of wheel-identification-data registration assisting devices such that said plurality of wheel-identification-data registration assisting devices have respective predetermined positions relative to the vehicle.

16. The wheel-identification-data registration assisting apparatus according to claim 15, wherein said supporting device includes (a) a main body, (b) a movable member which supports each of said plurality of wheel-identification-data registration assisting devices and which is supported by said main body such that said movable member is movable in a direction substantially parallel to an axis (P) of rotation of the wheel corresponding to said each wheel-identification-data registration assisting device, and (c) a positioning device operable, when the vehicle is located at a predetermined position relative to said main body, to move said movable member for thereby moving said each wheel-identification-data registration assisting device toward and away from each other.

17. The wheel-identification-data registration assisting apparatus according to claim 15, wherein said supporting device is provided with a wheel-rotation permitting device which permits each of said wheels to be rotated while the vehicle is located at a predetermined position relative to said main body.

18. The wheel-identification-data registration assisting apparatus according to claim 15, wherein said supporting device includes a plurality of rollers disposed for each of the wheels while the vehicle is located at a predetermined

position relative to said main body, so as to be held in contact with said each wheel, and a roller drive device operable to rotate said plurality of rollers.

19. The wheel-identification-data registration assisting apparatus according to claim 1, wherein each of said plurality of wheel-side devices includes (a) a wheel-state detecting portion operable to detect a state of a corresponding one of the wheels, and (b) a wheel-side information transmitting device operable to transmit wheel-side information including wheel-state data representative of the state of said corresponding one wheel detected by said wheel-state detecting portion, and said wheel identification data identifying said corresponding one wheel,

and wherein said body-side device includes (i) an information receiving device operable to receive said wheel-side information transmitted from said each wheel-side device, (ii) a memory for storing said information corresponding to said wheel identification data of each of the wheels, and (iii) a wheel-state obtaining portion operable to obtain the state of said each wheel identified by said wheel identification data, on the basis of said wheel-state data, when said wheel-state obtaining portion determines, on the basis of said wheel identification data received by said information receiving device and said information corresponding to said wheel identification data stored in said memory, that the wheel-side information received by said information receiving device are the information of said

each wheel identified by the wheel identification data received by said information receiving device.

20. The wheel-identification-data registration assisting apparatus according to claim 1, wherein each of said plurality of wheel-identification-data registration assisting devices is supported by a main body of a wheel inspecting device which is operable to detect a state in which the wheel corresponding to said each wheel-identification-data registration assisting device is mounted on the vehicle.

21. The wheel-identification-data registration assisting apparatus according to claim 1, wherein each of said plurality of wheel-identification-data registration assisting devices is supported by a main body of a wheel adjusting device operable to adjust a state in which the wheel corresponding to said each wheel-identification-data registration assisting device is mounted on the vehicle.

22. The wheel-identification-data registration assisting apparatus according to claim 1, wherein said assisting-device control device includes a registration-state obtaining device operable to obtain a state of the operation of said body-side device associated with the registration of said information corresponding to said wheel identification data.

23. The wheel-identification-data

registration assisting apparatus according to claim 1, wherein each of said plurality of wheel-identification-data registration assisting devices is operable to assist said system in at least a portion of a series of operation of the system from transmission of said wheel identification data from a corresponding one of said plurality of wheel-side devices to the registration of said information corresponding to said wheel identification data in said body-side device.

24. The wheel-identification-data registration assisting apparatus according to claim 1, wherein each of said plurality of wheel-identification-data registration assisting device includes a wheel-identification-data inspection assisting device operable to assist said system in an operation associated with inspection of a state of registration in said body-side device of said information corresponding to said wheel identification data, and said assisting-device control device includes a control portion operable to control said wheel-identification-data inspection assisting device.

25. The wheel-identification-data registration assisting apparatus according to claim 24, wherein said wheel-identification-data inspection assisting device is operable to assist said system in inspecting said information corresponding to said wheel identification data registered in said body-side device.

26. The wheel-identification-data registration assisting apparatus according to claim 25, wherein said wheel-identification-data inspection assisting device is operable to assist said system in checking if said information registered in said body-side device correctly identifies said each wheel-side device from which said body-side device has received said wheel identification data from said each wheel-side device.

27. The wheel-identification-data registration assisting apparatus according to claim 1, wherein each of said plurality of wheel-identification-data registration assisting devices includes a wheel-identification-data supply assisting device operable to assist said system in at least a portion of a series of operation of said system from transmission of said wheel identification data from a corresponding one of said plurality of wheel-side devices to reception of said wheel identification data by said body-side device, and said assisting-device control device includes a control portion operable to control said wheel-identification-data supply assisting device.

28. An identification-data registration assisting apparatus operable with a system including an information processing device and a remote detecting device operable to detect a state of a vehicle and transmit in a wireless fashion vehicle-state data representative of the detected state of the vehicle and identification data identifying said remote detecting device, said apparatus being operable to assist said

system in an operation of the system associated with registration in said information processing device of information corresponding to said identification data, said apparatus comprising:

- an identification-data registration assisting device, operable when located close to said remote detecting device while the vehicle is located at a predetermined position, to assist said system in at least a portion of a series of operation of the system to register said information corresponding to said identification data in said information processing device; and

- an assisting-device control device operable to control said identification-data registration assisting device.

29. A data-processing-information registration assisting apparatus operable with a system including an information processing device and a remote detecting device including a vehicle-state detecting portion operable to detect a state of a vehicle, said apparatus being operable to assist said system in an operation associated with registration, in at least one of said remote detecting device and said information processing device, of information corresponding to data-processing information used to process vehicle-state data representative of the state of the vehicle, said data-processing-information registration assisting apparatus comprising:

- a data-processing-information registration assisting device operable when said vehicle is located at a predetermined position

and when said data-processing-information registration assisting device is located close to said remote detecting device disposed on said vehicle, said data-processing-information registration assisting device operating to assist said system in at least a portion of the operation associated with said registration of the information corresponding to said data-processing information in said at least one of said remote detecting device and said information processing device; and

an assisting-device control device operable to control said data-processing-information registration assisting device.